Joshua Wu

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Education

Georgia Institute of Technology | Atlanta, GA   August 2021-December 2025
(Masters beginning Fall 2026)

- **Bachelor of Science in Mechanical Engineering**   -GPA 3.94/4.0
  Currently applying to Masters in Robotics program beginning Fall 2026
- **Concentration in Automation and Robotics**
- **Minor in Computer Science (Computing and Intelligence)**
- **Minor in Japanese**
  Relevant coursework: **Robotics, Mechatronics, Robotics and Perception, Machine Learning, Circuits and Electronics,** Artificial Intelligence, Control of Dynamic Systems, Motion Systems, Experimental methods, Mechanical Vibrations, Data Structures and Algorithms, Computer Organization and Programming, Statistics

Tokyo Institute of Technology | Tokyo, Japan   April 2024-August 2024

- **ACAP Study Abroad program for Mechanical Engineering**

Experience

Automotive LIDAR Vertically Integrated Project: Software Team   August 2025-Present
- Migrating Projects from ROS to ROS2 due to End Of Life

Automatic Card Shuffler for Trading Card Games Project Team Lead   January 2025-Present
- Created using Solidworks CAD and fabricated with Bambu Labs 3d-Printers
- Programmed RGB Color sensor and Time-of-flight distance sensor with I2C on STM32 Microcontroller using C
- Designed, soldered, and wired the electrical circuit for system

BAR Lab—Automated Steel Structure Weld Inspection using Infrared Thermography   May 2025-August 2025
- Prototyped and designed Robot End-Effectors to attach to ATI Quick Changers using Solidworks CAD
- Conducted literature reviews on Non-Destructive Testing Systems

League of Legends Machine Learning Prediction Course Project Team Lead   August 2024-December 2024
- Devised algorithms to predict winning teams in games using Logistic Regression, Random Forests, and LSTMs
- Processed data taken from over 2000 games via Excel and scripts coded in Python
- Programmed in Python using Sklearn, Pytorch, and TensorFlow Libraries
- Logistic Regression and Random Forest models achieved 92.79% and 97% accuracy respectively

Composite Spar Maker at Southern Spars   January 2024-March 2024
- Managed and distributed carbon fiber stock across departments increasing productivity in a factory environment
- Proofread engineering drawings, successfully preventing errors propagating through manufacturing process
- Cut and laminated layers of carbon fiber to make sailboat masts using wet and pre-preg lamination techniques

LIDAR Lab—Agile Locomotion and Manipulation Research   January 2023-December 2023
- Designed and prototyped sensor connectors and holders on a bipedal robot using Onshape CAD and 3D Printing
- Fabricated PCBs with Reflow Soldering

ME2110 Robotics Competition: Top 16 Finish   August 2022-December 2022
- Constructed a robot through CAD, GD and T, and various fabrication methods
- Programmed Robot Autonomously with Arduino using C++

RoboJackets: RoboWrestling Electrical Subteam Member   August 2021-May 2022
- Updated PCB for radio board with new routing and component locations using Autodesk Eagle
- Created PCB footprints for various electrical components such as a level shifter

HyTech Racing: Aerodynamics Mechanical Subteam Member   August 2021-December 2021
- Redesigned Swan-Neck Wing mount and applied Solidworks FEA to successfully reduce material required by 30%

Skills

- **Tools:** SolidWorks CAD and FEA, Autodesk Inventor, Onshape, ROS, Github, Excel, LabView, and Autodesk Eagle
- **Technical Skills:** Soldering, 3-D Printing, Prototyping, Machining, Electrical and Mechanical System Testing
- **Programming Languages:** Python, Java, C, MATLAB, LateX, and C++
- **Languages:** English, Intermediate Japanese, and Chinese-Mandarin

Awards and Achievements

- Faculty Honors: Spring 2025, Fall 2024, Summer 2023, Fall 2022, Summer 2022, Spring 2022, and Fall 2021
- Dean's List: Summer 2025, Fall 2023, and Spring 2023
- VEX Robotics and FLL Robotics Competition Worlds New Zealand Representative 2017, 2018, 2020- Team Leader